

REMARKS

Claims 1-8 are pending in the application. Claims 2 and 5 have been canceled. Claims 1, 3-4 and 6-8 have been amended. Claims 9-10 have been added. Thus, claims 1, 3-4 and 6-10 are currently before the Examiner.

New Claims

Dependent claim 9 has been added to depend from independent claim 1. Dependent claim 10 has been added to depend from independent claim 4. Support for these new claims can be found in the Applicant's specification, for example, on page 13, lines 10-12. Accordingly, no new matter has been added. Furthermore, claims 9 and 10 further limit the scope of independent claims 1 and 4, respectively. Applicant submits that no additional searching is deemed necessary in view of newly added claims 9 and 10.

Rejections Under 35 U.S.C. §112, second paragraph

Claims 1-8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Independent claims 1 and 4 have been amended to clarify that the "film carrier tape" and the "electronic component" in the preamble of the claims are the same "film carrier tape" and "electronic component" referred to in the body of the claims. Dependent claims 3 and 6-10 depend directly or indirectly from independent claims 1 or 4. Claims 2 and 5 have been canceled. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1, 3-4 and 6-8 pursuant to 35 U.S.C. § 112, second paragraph.

Rejections Under 35 U.S.C. §103(a)

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Applicant's Admitted Prior Art in view of U.S. Patent No. 4,363,455 to Del Bianco et al. (hereinafter "Del Bianco"). Independent claims 1 and 4 have been amended to include the limitations of claims 2 and 5, respectively. Claims 2 and 5 have been canceled.

Applicant's claimed invention is directed to an apparatus and method for taking up a spacer in an apparatus for processing a film carrier tape for mounting an electronic component. The apparatus accurately receives a spacer upon a reel in a substantially circular shape, without winding the spacer in an elliptical deviation or in an

eccentric state to the transverse direction of the spacer, when taking up the spacer fed out together with the film carrier tape.

As recited, *inter alia*, in amended independent claims 1 and 4, "a feed driving shaft of the reel of the feeding device is coupled to a first driving motor; and a take-up driving shaft of the spacer take-up device is coupled to a second motor through a clutch, and an amount of take-up of the spacer take-up device is set to be greater than that of the feeding device, thereby taking up the spacer at a constant tension." (Emphasis added.) As recited in Applicant's specification on page 13, line 19 – page 14, line 6:

"In this case, setting the amount of take-up of the spacer take-up device 20 is set to be greater than that of the feeding device 18. As a result, the spacer 28 can be taken up at a constant tension by the action of the powder clutch 29, which is provided between the driving motor 23 and the take-up driving shaft 54.

More specifically, the take-up driving shaft 54 of the spacer take-up device 20 is coupled to the driving motor 23 through the powder clutch 29. In addition, the clutch 29 is always set in a slip state in such a manner that the driving motor 23 for the take-up driving shaft 54 is always rotated at a higher speed than a predetermined speed. Consequently, the tension to be applied to the spacer 28 is set within a predetermined tension." (Emphasis added.)

Applicant's present invention discloses two separate motors. The first motor 21 is coupled to the feeding device 18. The second motor 23 is coupled to the spacer take-up device 20. The amount of take up of the spacer take-up device 20 is set to be greater than the feeding device 18.

In contrast, Del Bianco discloses a device for automatically laminating individual circuit boards with a dry film photopolymer resist material in which, as recited in Col. 6, line 68 – Col. 7, line 3, "the drive sprockets for the laminating rolls 104 and the take-up rolls 105 are driven by the same motor." As stated by the Examiner in the Office Action on page 4, "Del Bianco et al. disclose, as a result of the clutch device, the take-up roller will

have a lower speed than the feed device; and therefore, the take-up will be greater than that of the feeding device."

However, as recited on page 14, lines 2-6 of Applicant's specification, "[t]he clutch 29 is always set in a slip state in such a manner that the driving motor 23 for the take-up driving shaft 54 is always rotated at a higher speed than a predetermined speed." (determined by the control device). "Consequently, the tension to be applied to the spacer 28 is set within a predetermined tension." By winding the spacer at a higher speed than a predetermined speed determined by the control device, the spacer of Applicant's invention is wound in a substantially circular winding shape. In contrast, by winding the take-up roller of Del Bianco at a lower speed than the feed device, as induced by the clutch device, the winding path of Del Bianco includes an elliptical deviation. A purpose of Applicant's invention is to eliminate elliptical deviation which may induce deformation or scratch formation in the film carrier tape.

Accordingly, although Del Bianco discloses that tension may be applied to the backup strip, Del Bianco does not disclose or suggest that the amount of take-up of the spacer take-up device is set to be greater than that of the feeding device, thereby taking up the spacer at a constant tension, as claimed in amended claims 1 and 4.

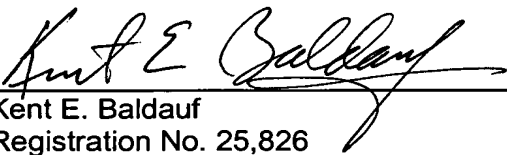
In view of the above remarks and amendments to claims 1, 3-4 and 6-8, Applicant respectfully requests reconsideration and withdrawal of the rejection over Applicant's Admitted Prior Art in view of Del Bianco.

Appl. No. 10/538,253
Amdt. dated June 20, 2007
Reply to Office Action of February 20, 2007
Attorney Docket No. 1217-051428

Summary

Applicant respectfully submits that the presently claimed invention is patentably distinct over the above-identified prior art of record and that claims 1, 3-4 and 6-10 are in condition for allowance. The Examiner's reconsideration and favorable action with respect to claims 1, 3-4 and 6-10 are respectfully requested.

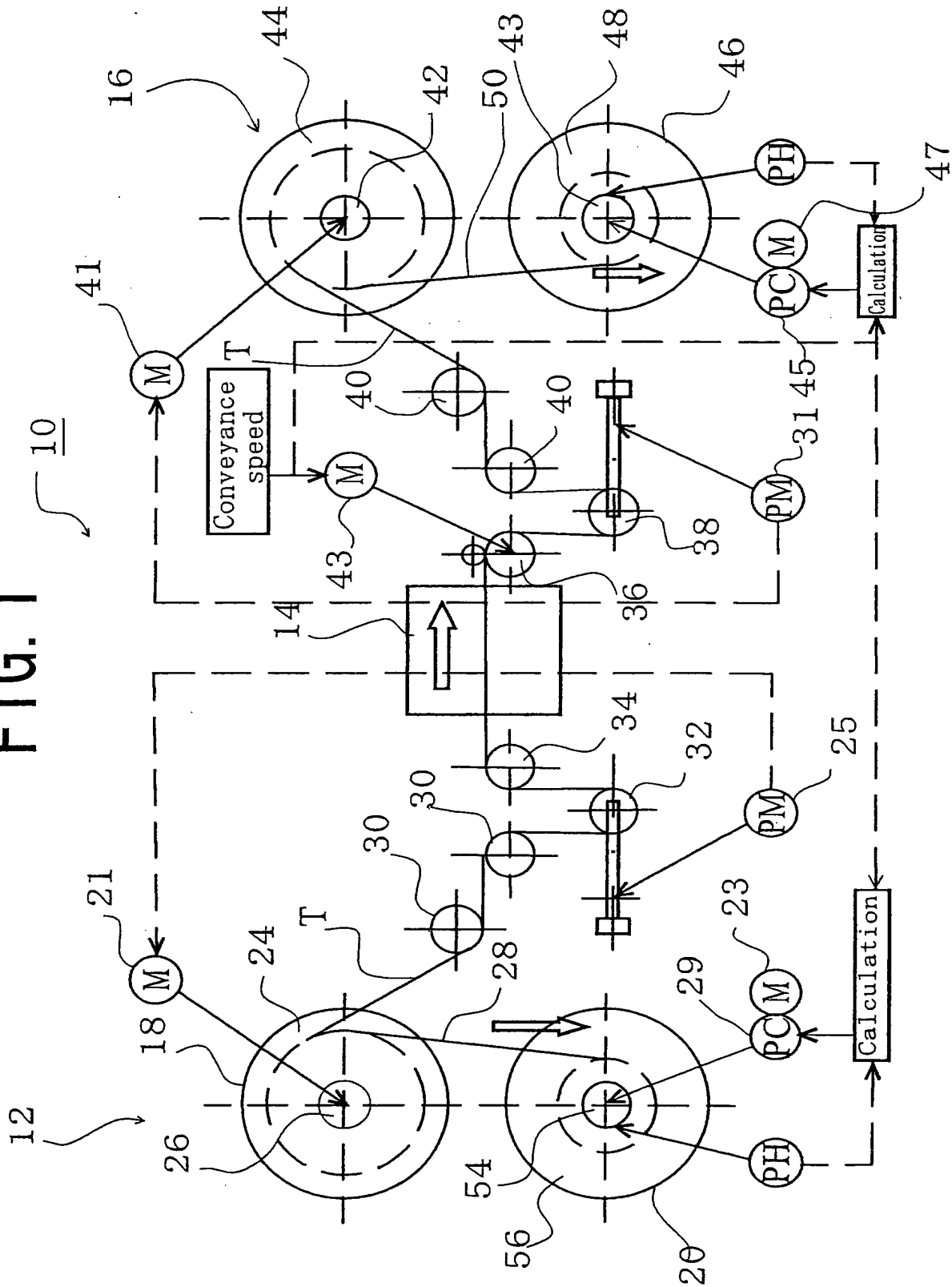
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FIG. 1



ANNOTATED SHEET

2/4

FIG. 2

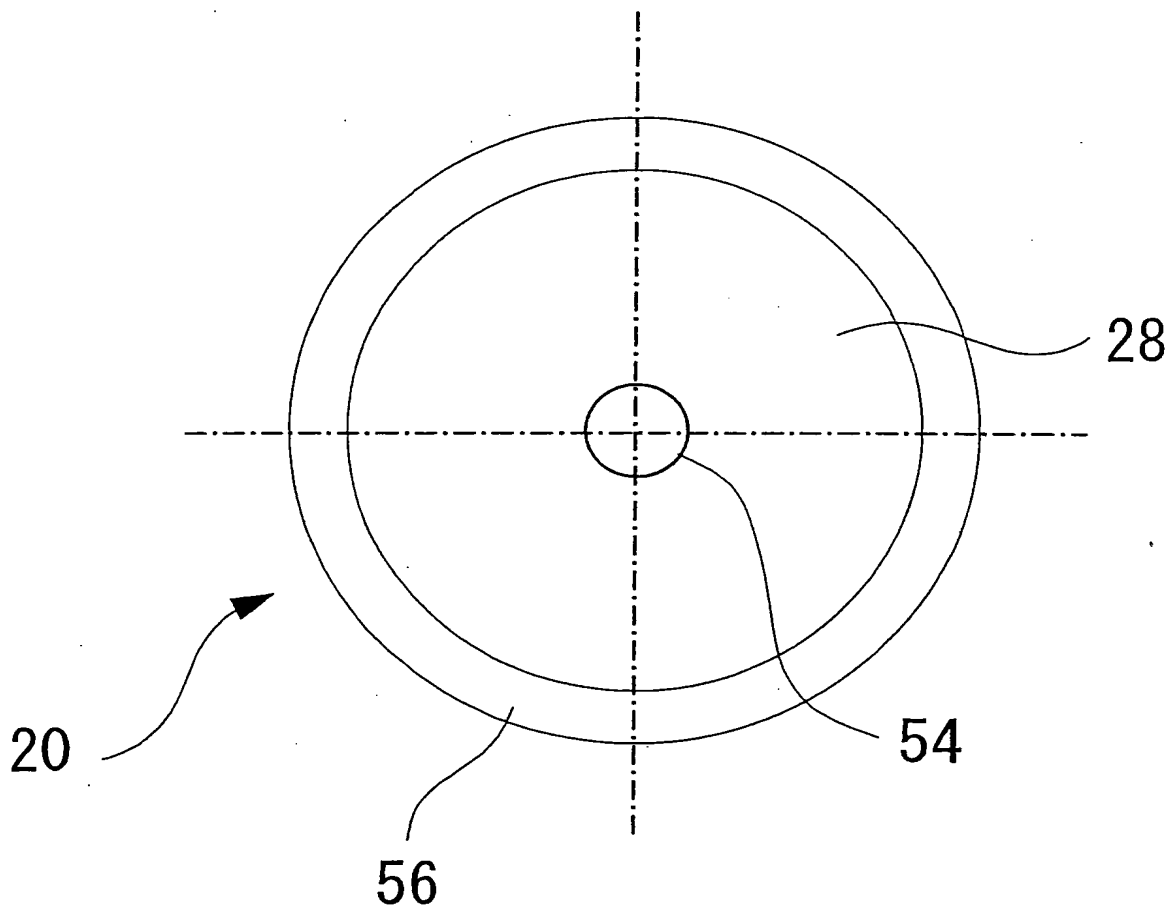
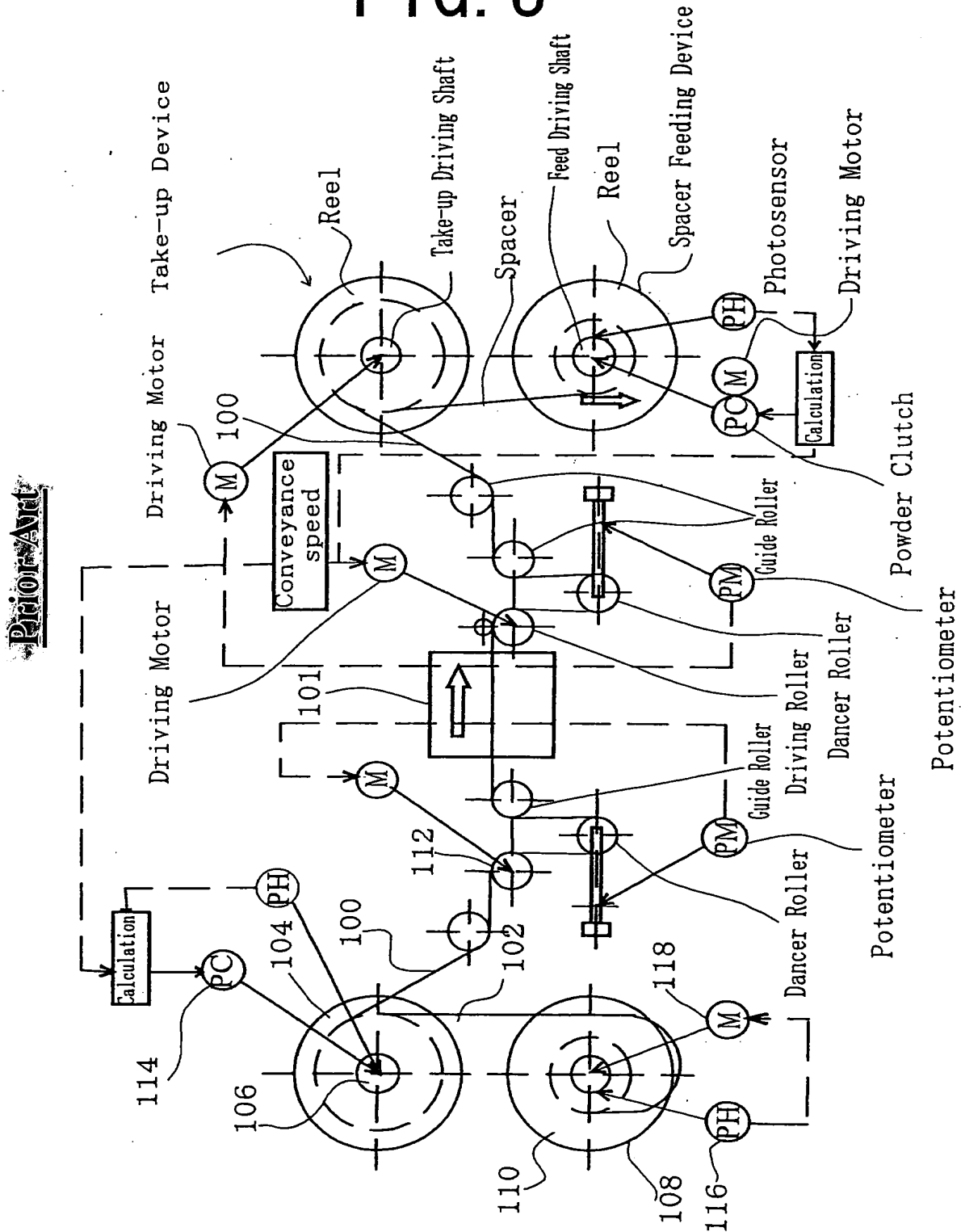


FIG. 3



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Fig. 4 (A)
Prior Art

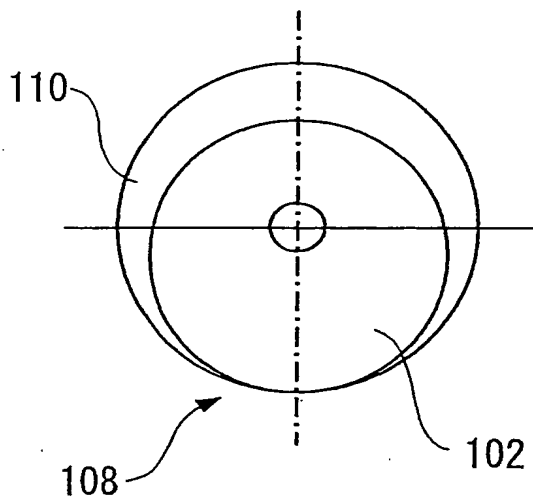


Fig. 4 (B)
Prior Art

